

CLAIMS

WHAT IS CLAIMED IS:

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A method for determining route redistribution at a device within a network, the method comprising:

5 receiving an information packet from a neighbor source, the information packet identifying the source as a stub router and specifying route types that the source will advertise; and

10 upon receiving notice of a failed link within the network, sending query packets requesting route information only to neighboring devices that have not been identified as stub routers.

2. The method of claim 1 wherein receiving an information packet comprises receiving a hello packet containing peer information.

15 3. The method of claim 1 wherein the device and stub router are configured for EIGRP.

4. The method of claim 1 wherein the network has a hub and spoke arrangement and the device is a hub router and the stub router is a spoke.

5. The method of claim 1 wherein the network includes a dual homed host.

6. The method of claim 1 wherein the route type that the source will advertise is connected routes.

7. The method of claim 1 wherein the route type that the source will advertise is summary routes.

8. The method of claim 1 wherein the route type that the source will advertise is static routes.

9. The method of claim 1 wherein the device and the neighboring devices have point-to-point links.

10. The method of claim 1 wherein the device and the neighboring devices have multipoint links.

11. The method of claim 10 wherein only one neighboring device is a stub router.

12. The method of claim 10 wherein multiple neighboring devices are stub routers.

13. The method of claim 1 wherein the device is a router.

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14. A method for reducing query generation for route redistribution within a network, the method comprising:

receiving information at a router identifying the router as a stub router;

5 sending an information packet from the stub router to neighboring devices, the information packet identifying the source as a stub router and specifying route types that the stub router will advertise; and

upon receiving a query for route information other than the type specified in the information packet, sending a response packet with routes identified as inaccessible.

10 15. The method of claim 14 wherein the network has a hub and spoke arrangement and the stub router is a spoke.

15 16. The method of claim 14 wherein the stub router is in communication with a dual homed device.

17. The method of claim 14 wherein sending an information packet comprises transmitting a hello packet.

18. The method of claim 14 wherein the stub router is configured for EIGRP.

19. A computer program product for determining route redistribution at a device within a network, the product comprising:

code that receives an information packet from a neighbor source, the information packet identifying the source as a stub router and specifying route types that the source will advertise;

code that sends query packets requesting route information only to neighboring devices that have not been identified as stub routers upon receiving notice of a failed connection; and

a computer-readable storage medium for storing the codes.

20. The computer program product of claim 19 wherein the computer readable medium is selected from the group consisting of CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, and data signal embodied in a carrier wave.

21. A computer system for determining route redistribution at a device within a network, the system comprising:

memory; and

a processor configured for receiving an information packet from a neighbor source, the information packet identifying the source as a stub router and specifying route types that the source will advertise, and sending query packets requesting route information only to neighboring devices that have not been identified as stub routers upon receiving notice of a failed connection.

22. A computer system for reducing query generation for route redistribution within a network, the system comprising:

means for identifying a device as a stub router;

means for sending an information packet from the stub router to neighboring devices, the information packet identifying the source as a stub router and specifying route types that the stub router will advertise; and

upon receiving a query for route information other than the type specified in the information packet, means for sending a response packet with routes identified as inaccessible.

26. A computer program product for reducing query generation for route redistribution within a network, comprising:

code that receives information at a router identifying the router as a stub router;

code that sends an information packet from the stub router to neighboring devices, the information packet identifying the source as a stub router and specifying route types that the stub router will advertise; and

code that sends a response packet with routes identified as inaccessible upon receiving a query for route information other than the type specified in the information packet; and

a computer-readable storage medium for storing the codes.

24. A computer system for reducing query generation for route redistribution within a network, comprising:

a processor configured for receiving information at a router identifying the router as a stub router, sending an information packet from the stub router to neighboring devices, the information packet identifying the source as a stub router and specifying route types that the stub router will advertise, and sending a response packet with routes identified as inaccessible upon receiving a query for route information other than the type specified in the information packet; and

memory for storing information received by the processor.

25. A computer-implemented method for route redistribution within a network, the method comprising:

receiving information at a router identifying the router as a stub router; and

limiting the amount of route information sent by the stub router to a neighboring device in response to a query for route information.

